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UNITED STATES PATENT AND TRADEMARK OFFICE

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10/083,229	02/26/2002	Trung M. Tran	004-6537	8579

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			ZHOU, TING	

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2173	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/083,229	TRAN ET AL.
	Examiner	Art Unit	
	Ting Zhou	2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 December 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   The amendment filed on 29 December 2005 have been received and entered. Claims 1-

20 are pending in the application and are examined below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United
> States before the invention thereof by the applicant for patent, or on an international application by another who
> has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention
> thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999

(AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA

35 U.S.C. 102(e)).

2.   Claims 1-6, 8-10 and 13-20 are rejected under 35 U.S.C. 102(e) as being anticipated by

McDonald et al. U.S. Patent 6,530,065 (hereinafter "McDonald").

Referring to claims 1 and 15, McDonald teaches a computer implemented method and

program comprising segmenting the display into a plurality of regions (as shown in Figures 8A

and 17, the display screen of the interface is segmented into a plurality of sections; for example,

in Figure 17, the display contains a region for displaying controls such as "Choose a Part",

"Analyze a Design", etc., and a region for "Components") (column 14, lines 61-67 through

column 15, lines 1-10), displaying, in a first of the plurality of regions, information associated

with a netlist as a plurality of cell names, with the cells names being listed in a listing sequence

and corresponding to the plurality of electrical functions (displaying a list of electrical circuit

parts used to create a design, with the parts listed in alphabetical order according to the part

name; furthermore, an alternate list of parts that can be used and displayed on the screen if the

user selects the "Select Alternate Part" button) (column 14, lines 61-67 through column 15, lines

1-10 and further shown in Figures 16A and 17), displaying in a second of the plurality of

regions, a plurality of virtual buttons (GUI selectable icons/tabs such as "Choose a Part", "Create

a Design", etc.) (Figure 17), a subgroup of which operates to commence testing of parameters of

a set of the plurality of electrical functions, with the electrical functions included in the set being

associated with a group of the plurality of cell names (controls such as "Analyze a Design" and

the "Simulate" button allow users to test the designed circuit with the group of included parts and

parameters) (column 8, lines 39-48 and Figure 17), and identifying, among the plurality of cell

names, cell names affiliated with the group differently than remaining cell names not affiliated

with the group (selected parts/components of the circuit to be simulated are displayed in the

"Components" Sections in Figure 17 and also displayed on the schematic shown in Figure 19,

while other parts not selected to be simulated, i.e. not affiliated with the group are under the

"Select Alternate Part" category) (column 13, lines 51-67, column14, line 61 - column 15, line

10 and Figure 17).

Referring to claim 10, McDonald teaches a computer network comprising a server storing

a netlist (column 5, lines 17-37 and further shown in Figure 1A), a client terminal (client's

computer with a web browser displaying the webpage) (column 7, lines 1-20 and further shown

in Figure 1B) having a display segmented into a plurality of regions (as shown in Figures 8A and

17, the display screen of the interface is segmented into a plurality of sections; for example, in

Figure 17, the display contains a region for displaying controls such as "Choose a Part",

"Analyze a Design", etc., and a region for "Components") (column 14, lines 61-67 through

column 15, lines 1-10), with information, associated with a netlist, being displayed in a first of

the plurality of regions, as a plurality of cell names, the cells names being ordered in a listing

sequence and corresponding to the plurality of electrical functions (displaying a list of electrical

circuit parts used to create a design, with the parts listed in alphabetical order according to the

part name; furthermore, an alternate list of parts that can be used and displayed on the screen if

the user selects the "Select Alternate Part" button) (column 14, lines 61-67 through column 15,

lines 1-10 and further shown in Figures 16A and 17), and a plurality of virtual buttons being

displayed in a second of the plurality of regions (GUI selectable icons/tabs such as "Choose a

Part", "Create a Design", etc.) (Figure 17), a subset of which operates to commence testing of

parameters of a set of the plurality of electrical functions, with the electrical functions included

in the set being associated with a group of the plurality of cell names (controls such as "Analyze

a Design" and the "Simulate" button allow users to test the designed circuit with the included

parts and parameters) (column 8, lines 39-48 and Figure 17), and the plurality of cell names

affiliated with the group having a visually perceivable identifier associated therewith that is not

associated with remaining cell names not affiliated with the group (selected parts/components of

the circuit to be simulated are displayed in the "Components" Section in Figure 17 and each

component listed has associated therewith, a visual outline of the component, shown via the

visual indicators displayed under the "Thermally Modelled" column while other parts not

selected to be simulated, i.e. not affiliated with the group, are under the "Select Alternate Part"

category) (column 13, lines 51-67, column14, line 61 - column 15, line 10 and Figure 17).

Referring to claims 2 and 16, McDonald teaches selectively associating individual cell

names with the group by effectuating a cursor event with respect to one of the plurality of virtual

buttons and identifying among the plurality of cell names, cell names associated with the set of

the plurality of electrical functions (users can associate parts/components with a circuit to be

designed and simulated by using cursor events such as selecting the button "Select Alternate

Part" and consequently selecting a part in the displayed list) (column 13, lines 51-67 and Figure

12).

Referring to claims 3 and 17, McDonald teaches each of the plurality of cell names

corresponds to an address in the sequence that differs from the address corresponding to the

remaining cell names in the sequence (each cell name, or part name has a corresponding address,

or part number; for example, "593D475X0050D2T" is the part number for the part "Cin")

(Figure 17) and further including affiliating cell names with the group by effectuating a cursor

event with respect to one of the plurality of virtual buttons and identifying among the plurality of

cell names, cell names that correspond to a range of addresses in the sequence associated with

the set of the plurality of electrical functions (users can use buttons such as "Select Alternate

Part" and consequently selecting a part with a corresponding part number to associate

parts/components with the designed circuit) (column 13, lines 51-67 and Figure 12).

Referring to claims 4 and 18, McDonald teaches selectively affiliating all of the cell names with the group by effectuating a cursor event with respect to one of the plurality of virtual buttons and identifying all of the plurality of cell names (all of the components/parts of the circuit are tested when the user selects the "simulate" button on the interface) (column 8, lines 39-48 and column 21, lines 40-58).

Referring to claims 5, 13 and 19, McDonald teaches displaying a data entry field in a third of the plurality of regions to facilitate selecting, from multiple categories, a category of parameters of the set of the plurality of electrical functions to test (the user can input and select the desired parameters and components values to simulate; for example, the user can display a dialog box for a desired component and enter data values for the desired component and initiate a new simulation) (column 7, lines 1-20, column 8, lines 39-48 and column 11, lines 52-55).

Referring to claims 6, 14 and 20, McDonald teaches testing the parameters of the set of the plurality of electrical functions and displaying in a fourth of the plurality of regions information concerning results of the testing (a summary of the circuit simulation can be displayed, as shown in Figure 30, or a waveform resulting from the simulation can be displayed on the screen) (column 11, lines 52-67 through column 12, lines 1-33 and Figure 5A).

Referring to claim 8, McDonald teaches displaying a visually perceivable identifier with the cell names (a visual outline of the component is displayed with each part/component listed) (column 15, lines 6-10 and further shown by the visual indicators displayed under the "Thermally Modelled" column in Figure 17).

Referring to claim 9, McDonald teaches displaying a visually perceivable identifier with the cell name groups while maintaining the listing sequence (a visual outline of the component is

displayed with each part/component listed, in the sequence each parts/component is displayed)

(column 15, lines 6-10 and further shown by the visual indicators displayed under the

"Thermally Modelled" column in Figure 17).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald et al.

U.S. Patent 6,530,065 (hereinafter "McDonald"), as applied to claim 1 above, and Fan et al. U.S.

Publication 2002/0188902 (hereinafter "Fan").

Referring to claim 7, McDonald teaches all of the limitations as applied to claim 1 above.

However, McDonald fails to explicitly teach sequentially testing the parameters of the set of the

plurality of electrical functions, with an order in which the electrical functions of the set are

tested being independent of an order in which the cell names are arranged in the listing sequence.

Fan teaches an interface for testing an integrated circuit with a plurality of parameters similar to

that of McDonald. In addition, Fan further teaches sequentially testing the parameters of the set

of the plurality of electrical functions, with an order in which the electrical functions of the set

are tested being independent of an order in which the cell names are arranged in the listing

sequence (the users can test the circuit sequentially with a test sequence created from selected

listed parameters to associated with test patterns) (Fan: page 2, paragraphs0013-0014). It would have been obvious to one of ordinary skill in the art, having the teachings of McDonald and Fan before him at the time the invention was made, to modify the method for testing circuit components of McDonald to include the ordered testing of circuit parameters, taught by Fan. One would have been motivated to make such a combination in order to provide an accurate and systematic way for users to view the output results of circuit testing, thus allowing users to easily see which components caused a test error or failure.

4.   Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald et al. U.S. Patent 6,530,065 (hereinafter "McDonald"), as applied to claim 10 above, and Kekic et al. U.S. Patent 6,664,978 (hereinafter "Kekic").

Referring to claim 11, McDonald teaches all of the limitations as applied to claim 10 above. However, McDonald fails to explicitly teach the visually perceivable identifier consists of having a region of the computer surrounding cell names, affiliated with the group, displayed in a color that differs from displayed in the region surrounding the remaining cell names of the plurality of cell names. Kekic teaches a client-server network comprising a graphical interface for displaying a list of components similar to that of McDonald. In addition, Kekic further teaches the visually perceivable identifier for the components consists of having a region of the computer surrounding cell names, affiliated with the group, displayed in a color that differs from displayed in the region surrounding the remaining cell names of the plurality of cell names (each component, or outline of the component of the network can be displayed in a different color to indicate a different status of the component) (Kekic: column 5, lines 51-65). It would have been

obvious to one of ordinary skill in the art, having the teachings of McDonald and Kekic before

him at the time the invention was made, to modify the computer network for testing circuit

components of McDonald to include the display of components in different colors, taught by

Kekic. One would have been motivated to make such a combination in order to allow users to

quickly and easily obtain considerable information about the status of a tested circuit component

at a glance of the visual display.

Referring to claim 12, McDonald teaches all of the limitations as applied to claim 10

above. However, McDonald fails to explicitly teach the visually perceivable identifier consists

of an icon displayed adjacent to the cell names affiliated with the group. Kekic teaches a client-

server network comprising a graphical interface for displaying a list of components similar to

that of McDonald. In addition, Kekic further teaches the visually perceivable identifier consists

of an icon displayed adjacent to the cell names affiliated with the group (displaying an icon with

each component of the network displayed as a list of components in the navigation tree on the

left hand side of the display) (Kekic: column 23, lines 27-40, column 56, lines 66-67 through

column 57, lines 1-2 and further shown in Figures 6A-6C). It would have been obvious to one of

ordinary skill in the art, having the teachings of McDonald and Kekic before him at the time the

invention was made, to modify the computer network for testing circuit components of

McDonald to include displaying an icon with each component, taught by Kekic. One would

have been motivated to make such a combination in order to allow users to quickly and easily

have access to and select components to be used as parts of a circuit design.

Response to Arguments

5.   Applicant's arguments filed 29 December 2005 have been fully considered but they are

not persuasive:

6.   The applicant argues that the other parts which may be displayed in the "Select Other

Parts" category cannot correspond to the claimed limitation of "remaining cell names not

affiliated with the group" because both the cell names affiliated with the group and the remaining

cell names not affiliated with the group are from "among said plurality of cell names" and that

the claim language "plurality of cell names" explicitly is associated with the netlist of the circuit

design, and not to alternate parts that might be used in such a circuit design. The examiner

respectfully disagrees. McDonald teaches that information associated with a netlist is displayed

as a "plurality of cell names", in other words, the information or components of a circuit design

are displayed as a plurality of parts, as shown in Figure 17; the plurality of parts associated with

the circuit design include all the parts that are available to be included in the circuit. For

example, users can choose to replace an existing part with an alternate part by selecting the

"Select Alternate Part" button 1708 of Figure 17, which displays a list of alternate parts that may

be used for a particular component of the circuit in a pop-up window, as recited in column 13,

lines 51-60. A netlist is a list of all components and interconnections of an integrated circuit.

Since the parts in the list of alternative parts can be used in the design of the circuit, they are part

of the list of information/components that are *associated* with the circuit design and therefore,

are part of the "plurality of cell names". McDonald thus teaches that from the total list of cell

names, or components/parts that are associated with the integrated circuit, there is a distinct

display of two groups of cell names, i.e. one group of components that are selected, as displayed

in the "Components" section in Figure 17 and one group of components that are alternate parts,

as displayed under the "Select Alternate Part" category and shows the capability of displaying

two groupings of cell names, specifically, displaying the cell names affiliated with the group of

cell names to be simulated and the remaining cell names not affiliated with the group differently.

7.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ting Zhou whose telephone number is (571) 272-4058. The

examiner can normally be reached on Monday - Friday 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Cabeca can be reached at (571) 272-4048. The fax phone number for the

organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINE..